

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A line dot recorder comprising:

a rotary drum having an outer periphery of a sufficient length to mount a printing medium ~~thereon~~, thereon;

a drum driving means for rotating said rotary ~~drum~~, drum; and

a recording head provided close to ~~the~~ an outer periphery of said rotary drum and having a plurality of recording elements in the form of jet nozzle orifices arranged in lines in ~~the~~ a main scanning direction at intervals corresponding to a predetermined pixel density in a proper print area, wherein the outer periphery of said rotary drum has ~~an outer periphery of~~ a length which is N (an integer of two or more) times ~~the~~ a base length which is ~~the~~ a length in ~~the~~ a sub-scanning direction of the printing medium and is sufficient to mount and hold N sheets of the printing medium, and said rotary drum is arranged to be rotated so as to move the printing medium relative to said recording head in the sub-scanning direction at ~~such~~ a speed ~~over greater than~~ a standard speed such that dot recording to pixels of the printing medium of a regular length will be done with a predetermined pixel density at ~~the~~ an operating period of said recording head, and such that dot recording to the pixels is carried out by N-pass printing with N rotations of said rotary drum to form images on the printing medium.

2. (Currently Amended) A line dot recorder as claimed in claim 1, wherein the speed ~~over greater than~~ said standard speed is N times said standard speed in the sub-scanning direction of the printing medium.

3. (Currently Amended) A line dot recorder as claimed in claim 1, further comprising:
a head moving means coupled with said recording head for moving said recording head relative to said rotary drum in the main scanning direction and a direction opposite thereto, wherein said recording head is arranged to be moved relative to said rotary drum to N positions including a base position and the recording elements corresponding to ~~the~~ an area to be dot recorded on the printing medium are ~~operated~~ operable in each of the N positions to form images.

4. (Currently Amended) A line dot recorder as claimed in claim 1, further comprising:
a paper supply means for supplying ~~[[a]]~~ paper as the printing medium to said rotary drum at a predetermined paper supply position every predetermined revolutions of said rotary drum, ~~drum~~, drum;

a paper mounting/holding means for mounting and holding N sheets of the printing medium on said rotary ~~drum~~, drum; and

a paper delivery means for delivering the mounted printing medium at a predetermined paper delivery position every predetermined revolutions of said rotary drum, whereby ~~supplying, mounting, holding and delivering a plurality~~ said paper supply means, said paper mounting/holding means and said paper delivery means are arranged to supply, mount, hold and deliver multiple sheets of the printing medium to and from said rotary drum one after another at predetermined timings, and ~~forming to form~~ forming to form uniform-quality images continuously on said ~~plurality multiple sheets~~ multiple sheets of the printing medium.

5. (Currently Amended) A line dot recorder as claimed in claim 3, further comprising:
a paper supply means for supplying ~~[[a]]~~ paper as the printing medium to said rotary drum at a predetermined paper supply position every predetermined revolutions of said rotary drum, ~~drum~~, drum;

a paper mounting/holding means for mounting and holding N sheets of the printing medium on said rotary ~~drum~~, drum; and

a paper delivery means for delivering the mounted printing medium at a predetermined paper delivery position every predetermined revolutions of said rotary drum, whereby ~~supplying, mounting, holding and delivering a plurality~~ said paper supply means, said paper mounting/holding means and said paper delivery means are arranged to supply, mount, hold and deliver multiple sheets of the printing medium to and from said rotary drum one after another at predetermined timings, and ~~forming to form~~ forming to form uniform-quality images continuously on said ~~plurality multiple sheets~~ multiple sheets of the printing medium.

6. (Currently Amended) A line dot recorder as claimed in claim 4, wherein ~~while said~~

~~plurality of printing medium are supplied, mounted and held, and delivered,~~ the recording elements are operable to perform dot recording is performed to pixels of N sheets of the printing medium by use of such recording elements that the such that an order of printed images will be the same while said multiple sheets of the printing medium are being supplied, mounted, held and delivered, whereby images are formed so that the order of printed images on the N sheets of the printing medium will be the same.

7. (Currently Amended) A line dot recorder as claimed in claim 4, wherein ~~while said plurality of printing medium are supplied, mounted and held, and delivered,~~ recording elements of the nozzles are operable to perform dot recording is performed to pixels for N sheets of the printing medium by use of recording elements of the same nozzles while said multiple sheets of the printing medium are being supplied, mounted, held and delivered, whereby images are formed by the same nozzles for print images on N sheets of the printing medium.

8. (Currently Amended) A line dot recorder as claimed in claim 3, wherein in moving said recording head in the main scanning direction and in an opposite direction to N positions including said base position, said recording head is arranged to be moved to and stopped to such at positions such that distances between any adjacent positions in ~~the~~ a maximum moving distance in the main scanning direction will be uniform, and said head moving means is coupled with said recording head so that said recording head can be moved for such a distance that a plurality of print images can be formed.

9. (Currently Amended) A line dot recorder as claimed in claim 1, wherein said recording head has a plurality of recording elements corresponding to pixels in each of said N positions, and even-numbered ones or odd-numbered ones of said recording elements of even numbers or odd numbers can be operated for dot recording for each of said N positions.

10. (Currently Amended) A line dot recorder as claimed in claim 4, wherein ~~paper supply by said paper supply means and paper delivery by said paper delivery means~~ are arranged

to supply and deliver paper ~~carried out~~ to said rotary drum once per $(1 + 1/N)$ rotation of said rotary drum.

11. (Currently Amended) A line dot recorder as claimed in claim 1, wherein said printing medium is a long sheet of a length which is N times ~~the~~ a length in the sub-scanning direction of ~~the~~ a maximum size paper, and an image of a size which is equal to N times ~~the~~ an image formed on said maximum size paper is formed on said long sheet.

12-19. (Cancelled)

20. (Currently Amended) A line dot recorder as claimed in claim 1, wherein said recording head comprises a line head having recording elements in the form of jet nozzles, wherein a tray is provided between said drum and said line head so as to be parallel with the shaft of said drum, said tray being inserted between said drum and said line head for cleaning of said line head, and wherein a translating means for pulling out said tray is provided.

21-22. (Cancelled)

23. (Currently Amended) A line dot recorder as claimed in claim 2, further comprising:

a head moving means coupled with said recording head for moving said recording head relative to said rotary drum in the main scanning direction and a direction opposite thereto, wherein said recording head is arranged to be moved relative to said rotary drum to N positions including a base position and the recording elements corresponding to ~~the~~ an area to be dot recorded on the printing medium are ~~operated~~ operable in each of the N positions to form images.

24. (Currently Amended) A line dot recorder as claimed in claim 2, further comprising:

a paper supply means for supplying ~~[[a]]~~ paper as the printing medium to said rotary

drum at a predetermined paper supply position every predetermined revolutions of said rotary drum, ~~drum~~, drum;

a paper mounting/holding means for mounting and holding N sheets of the printing medium on said rotary ~~drum~~, drum; and

a paper delivery means for delivering the mounted printing medium at a predetermined paper delivery position every predetermined revolutions of said rotary drum, whereby ~~supplying, mounting, holding and delivering a plurality~~ said paper supply means, said paper mounting/holding means and said paper delivery means are arranged to supply, mount, hold an deliver multiple sheets of the printing medium to and from said rotary drum one after another at predetermined timings, and ~~forming to form~~ uniform-quality images continuously on said ~~plurality multiple sheets~~ of the printing medium.

25. (Currently Amended) A line dot recorder as claimed in claim 5, wherein ~~while said plurality of printing medium are supplied, mounted and held, and delivered, the recording elements are operable to perform~~ dot recording ~~is performed~~ to pixels of N sheets of the printing medium ~~by use of such recording elements that the~~ such that an order of printed images will be the same while said multiple sheets of the printing medium are being supplied, mounted, held and delivered, whereby images are formed so that the order of printed images on the N sheets of the printing medium will be the same.

26. (Currently Amended) A line dot recorder as claimed in claim 5, wherein ~~while said plurality of printing medium are supplied, mounted and held, and delivered, recording elements of the nozzles are operable to perform~~ dot recording ~~is performed~~ to pixels for N sheets of the printing medium ~~by use of recording elements of the same nozzles~~ while said multiple sheets of the printing medium are being supplied, mounted, held and delivered, whereby images are formed by the same nozzles for print images on N sheets of the printing medium.

27. (Currently Amended) A line dot recorder as claimed in claim 5, wherein ~~paper supply by said paper supply means and paper delivery by said paper delivery means are~~ arranged

to supply and deliver paper ~~carried out~~ to said rotary drum once per $(1 + 1/N)$ rotation of said rotary drum.

28. (Currently Amended) A line dot recorder as claimed in claim 2, wherein said printing medium is a long sheet of a length which is N times ~~the~~ a length in the sub-scanning direction of ~~the~~ a maximum size paper, and an image of a size which is equal to N times ~~the~~ an image formed on said maximum size paper is formed on said long sheet.

29. (Cancelled)

30. (Currently Amended) A line dot recorder as claimed in claim 24, wherein ~~while said plurality of printing medium are supplied, mounted and held, and delivered, the recording elements are operable to perform~~ dot recording ~~is performed~~ to pixels of N sheets of the printing medium ~~by use of such recording elements that the~~ such that an order of printed images will be the same while said multiple sheets of the printing medium are being supplied, mounted, held and delivered, whereby images are formed so that the order of printed images on the N sheets of the printing medium will be the same.

31. (Currently Amended) A line dot recorder as claimed in claim 24, wherein ~~while said plurality of printing medium are supplied, mounted and held, and delivered, recording elements of the nozzles are operable to perform~~ dot recording ~~is performed~~ to pixels for N sheets of the printing medium ~~by use of recording elements of the same nozzles while said multiple sheets of the printing medium are being supplied, mounted, held and delivered~~, whereby images are formed by the same nozzles for print images on N sheets of the printing medium.

32. (Currently Amended) A line dot recorder as claimed in claim 24, wherein ~~paper supply by~~ said paper supply means and ~~paper delivery by~~ said paper delivery means are arranged to supply and deliver paper ~~carried out~~ to said rotary drum once per $(1 + 1/N)$ rotation of said rotary drum.

33. (New) A line dot recorder as claimed in claim 20, further comprising:
an elevating means for moving said line head vertically to expand a distance between said line head and said drum.

34. (New) A line dot recorder as claimed in claim 33, wherein said elevating means is a wing having a fulcrum shaft at both sides of which a plurality of line heads are arranged in parallel, said wing being arranged to be opened and closed around said fulcrum shaft so as to expand the distance between said drum and said line head.

35. (New) A line dot recorder as claimed in claim 20, further comprising:
a suction port provided at a drum side end of said tray, said suction port being connected to a suction pump so as to suck ink from the nozzles of said line head.